



# Education Requirements

## Phlebotomist

Those interested in phlebotomy often enroll in a program at a college or a technical school. During these programs, students learn how to draw blood and properly interact with patients. After completing an education program, students can choose to become certified.

## Medical and Clinical Laboratory Technician

Students are encouraged to enroll in Clinical Laboratory Sciences accredited associate degree programs in order to sit for the American Society for Clinical Pathology examination for certification. ASCP certification is preferred by employers.

## Medical and Clinical Laboratory Technologist

Medical lab technologists must complete a bachelor's degree and may later obtain a master's degree. Many employers require technologists to be certified by the American Society for Clinical Pathology.

## Cytogenetic Technologist

A bachelor's degree in cytotechnology, medical technology, biology, chemistry or a related field is generally required for this career. The American Society for Clinical Pathology offers a voluntary certification examination for becoming a technologist in cytogenetics.

## Blood Bank Technologist

Many technicians earn an associate's degree or certificate in phlebotomy.

## Pathologists

Pathology residencies (four years) include training in anatomic and/or clinical pathology, providing instruction in autopsy, image analysis, cytogenetics, molecular diagnostics and protein biochemistry. A one- to two-year pathology fellowship is optional. Pathologists must have a valid state medical license; optional pathology board certification.

## key

### SALARY

\$ \$ \$ \$ \$	\$25,000 or lower
\$ \$ \$ \$ \$	\$25,001 to \$39,999
\$ \$ \$ \$ \$	\$40,000 to \$59,999
\$ \$ \$ \$ \$	\$60,000 to \$99,999
\$ \$ \$ \$ \$	\$100,000 or higher

### JOB OUTLOOK

★ ★ ★ ★ ★	4.9% increase or lower
★ ★ ★ ★ ★	5% - 9.9% increase
★ ★ ★ ★ ★	10% - 14.9% increase
★ ★ ★ ★ ★	15% - 19.9% increase
★ ★ ★ ★ ★	20% increase or higher

### EDUCATION

🎓 🎓 🎓 🎓 🎓	High school diploma or equivalent
🎓 🎓 🎓 🎓 🎓	Postsecondary non-degree award or Associate's degree
🎓 🎓 🎓 🎓 🎓	Bachelor's degree
🎓 🎓 🎓 🎓 🎓	Master's degree
🎓 🎓 🎓 🎓 🎓	Doctoral or professional degree

*Data for salary, job outlook and education infographics were compiled from Missouri 2012-2022 Occupational Projections, published online by the Missouri Economic Research and Information Center (MERIC) within the Missouri Department of Economic Development. When positions in this publication were not directly comparable to a position in MERIC's data, U.S. Bureau of Labor Statistics, data for salary, job outlook, and education were used.*



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## clinical laboratory services

Professionals in clinical laboratory services perform tests on blood and other bodily fluids (i.e. amniotic fluid or fluid around the lungs) to find disease, infection and chemical imbalances in patients. These tests are very important in choosing the best way to treat patients.

phlebotomists



- draw blood from patients in a safe and sanitary manner
- collect fluid and tissue samples, and collect specimens for testing
- may transport specimens or fluid samples from collection sites to laboratories

medical and clinical laboratory technicians



- perform routine medical laboratory tests for diagnosis, treatment and prevention of disease
- prepare blood, urine and tissue specimens for analysis
- use sophisticated equipment to look for bacteria, parasites and other microorganisms
- may analyze the chemicals in fluids or match blood to help people get the right blood type in a transfusion

medical and clinical laboratory technologists



- prepare samples for analysis, monitor testing procedures, and analyze results for infection or chemical composition
- work in all areas of a clinical lab and perform a wide variety of tests on body fluids, including blood, urine, or spinal fluid, to determine presence of normal or abnormal components
- confirm and report result to doctors and other health care professionals

cytogenetic technologists



- analyze chromosomes found in biological specimens such as amniotic fluids, bone marrow and blood to aid in the study, diagnosis or treatment of genetic diseases
- count numbers of chromosomes and identify the structural abnormalities by viewing culture slides through microscopes, light microscopes or photomicroscopes

blood bank technologists



- collect, label and prepare blood, plasma and other components for transfusions
- collect blood, determine blood type and prepare blood and its components (red cells, white cells, platelets and plasma) for transfusion into a patient
- search for blood irregularities and process, test and label blood from blood donors

pathologists



- diagnose presence and stage of diseases using laboratory techniques and patient specimens
- study the nature, cause and development of diseases
- may perform autopsies

Key is located on reverse.

### career spotlight

REBECCA, MEDICAL LABORATORY TECHNOLOGIST

I knew I wanted to help people and I really enjoyed anatomy and physiology, but I did not particularly want patient contact. I toured a medical laboratory and knew this was the career for me. The best part of my job is making sure that patients are being taken care of with the best care possible. It is very rewarding as a technician when you get to track a patient from arrival and treatment to discharge, hoping they go home a lot healthier than they came in. Every day is different and that excites me.

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